

Example 2: Jim makes and sells gourmet food items. He makes two types of salad dressing, garlic and tofu. Each gallon of garlic dressing requires 2 quarts of oil and 2 quarts of vinegar. Each gallon of tofu dressing requires 3 quarts of oil and 1 quart of vinegar. Jim makes a \$3 profit on each gallon of garlic dressing and a \$2 profit on each gallon of tofu dressing. He has 18 quarts of oil and 10 quarts of vinegar on hand. How many gallons of each type of dressing should he make to maximize profits?


G = Garlic, T = Tofu

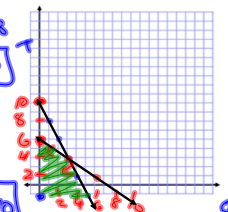
$$2G + 3T \leq 18$$

$$3T \leq -2G + 18$$

$$T \leq -\frac{2}{3}G + 6$$

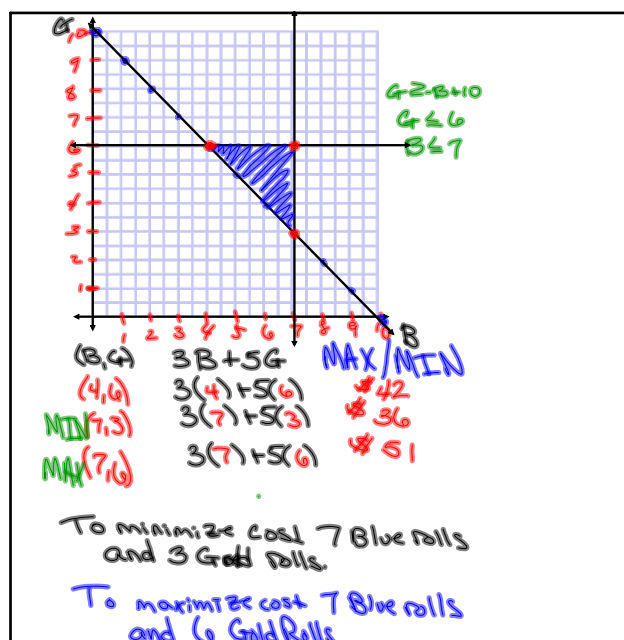
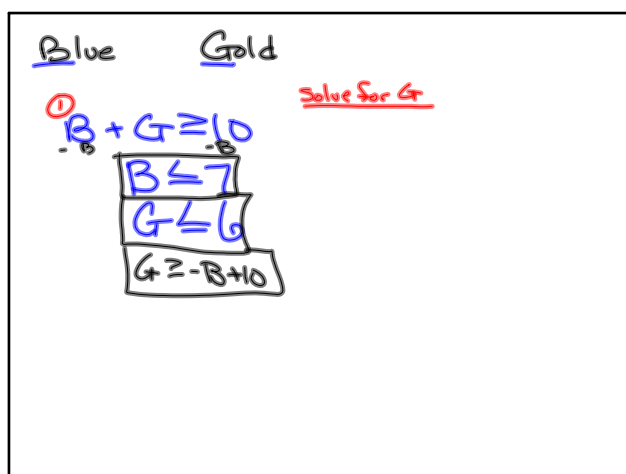
$$G + T \leq 10$$

$$T \leq -G + 10$$



(G, T)	3G + 2T	Max
(0, 0)	3(0) + 2(0)	\$0
(5, 0)	3(5) + 2(0)	\$15
(3, 4)	3(3) + 2(4)	\$17
(0, 6)	3(0) + 2(6)	\$12

3 Gallons of Garlic  
4 Gallons of Tofu



$$R + C \leq 50$$
$$\begin{array}{|l} R \leq 25 \\ C \leq 40 \end{array}$$
$$R \leq -C + 50$$

Finish the Linear Programming Worksheet